

# Science for Nicaragua Newsletter

Produced by the Nicaragua Committee of Science for the People

Volume 3, No. 1

January-February 1989

## SfN Seeks Members for June Delegation

The Cambridge SfN committee is organizing a two-week delegation to Nicaragua this June, with the purpose of increasing communications between Nicaraguan educators and their counterparts in the U.S. Newsletter readers and others interested in education, science, and technology in Nicaragua are invited to participate. The program will tentatively include meetings with university administrators, professors, and students, officials in the Nicaraguan Ministry of Education, and SfN instructors. Other meetings can be arranged according to the interests of individual participants. We hope to be able to organize meetings between members of the delegation and Nicaraguan educators in the same field.

The delegation is limited to 10 members, and two or three slots are already filled. Potential participants should expect to be interviewed in Cambridge, and to take part in program planning. Ability to communicate in Spanish is helpful but not essential; translators will be available for most activities.

The exact dates and cost of the tour will be determined this spring. Similar trips in the past have cost approximately \$1100, including round-trip airfare, accommodations, sightseeing, inter-city transportation, and some meals.

For further information, please write Science for Nicaragua/June delegation, Science for the People, 897 Main St., Cambridge, MA 02139, or call (617)-547-0370.

## SfN Hosts Nicaraguan Students

Last October, the Berkeley and Cambridge chapters of SfN participated in a nationwide tour of four Nicaraguan students. The primary goal of the tour, initiated by Maestros por la Paz, a San Francisco-based organization of school teachers, was to establish channels of communication and exchange between students in Nicaragua and the U.S. High school students Erica Tómas and Amalia Sirolli, medical student (and head of three academic departments) Jorge Cuadra, and Roger Zamora, a student of business administration in Mexico, began their tour with eight public events in Berkeley and visits to six classes at the University of California campus, all organized by the local SfN chapter. After one week touring northern California from Sacramento to Santa Cruz, the students split up. Cuadra and Sirolli continued on to Los Angeles, while Zamora and Tómas flew to Boston, where SfN-Cambridge organized meetings at MIT, Brandeis, Lesley College, and several local high schools. Zamora and Tómas were also hosted in Washington and New York by local associations of teachers of English as a second language.

The Nicaraguans were generally well-received, although Tómas complained that most high school students she met seemed "apathetic," compared with students in Nicaragua.

## Three Letters from David Kattenburg

*David, a biochemical pharmacologist, started teaching last August at the Medical Faculty of the National Autonomous University in Managua (UNAN-Managua). The following letters were received in early January.*

August 21, 1988

Tomorrow afternoon I begin teaching a thirty hour course in molecular pharmacology. My students are 4 physician/professors and a half dozen senior medical student/teaching assistants in the faculty of medicine at the Universidad Nacional Autónoma de Nicaragua. Medical students at UNAN pursue a five year course of study, followed by a year of internship and then two years of "servicio social" within a hospital or barrio health clinic. They have an enormous work load, including four hours a week of "work-study" within the Managua community. Physicians can complete their social service by teaching at the medical faculty. Some continue on as *docentes* (professors); others take up medical practice on their own or find positions in clinics or hospitals.

The point of this type of course is to broaden departmental knowledge in a basic area of medical science, and in particular, to upgrade the academic qualifications of the teaching staff. The sixty professors here range in age from 24 to 28. Those who end up teaching pharmacology have only studied the subject for one year themselves, and have never conducted research.

In addition to lecture presentations, I will be organizing two hours a week of seminar-style discussion, where participants will have a chance to read current research papers critically and present their contents to the class. I have some doubts about whether this approach will work. How can students reach a critical understanding of a research paper when they have never conducted lab research themselves, nor read and studied current research reports? With a library that contains virtually no international research journals of importance, in a country where basic medical research is essentially non-existent, isn't this just a dry—and perhaps frustrating academic exercise?

Perhaps not. Everyone seems to be genuinely excited about these sessions. Jorge Cuadra, the head of the physiology, pharmacology and biochemistry departments here, is extremely interested in obtaining subscriptions to respected journals which students can refer to and use for courses like mine. Furthermore, he has asked me to investigate the possibility of setting up a small physiology/experimental pharmacology lab where professors and advanced medical students can learn research techniques and enliven their academic routine.

Starting in October I will also be teaching a short course in molecular genetics. I have also agreed to collaborate with fellow SfN cooperant Alan Archibald on the isolation of pharmacologi-

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This issue was produced by Michael Harris, Eric Entemann, and Gary Keenan.

SfN chapters:

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20901 (for literature donations)  
CONIPCIT, Estación U.P.R., Apartado 21868, San Juan,  
Puerto Rico 00931-1868.

## Three New Medical Projects

SfN now has a concentration—two professors—at the UNAN-Managua Faculty of Medicine. The following three projects have been developed in consultation with their Nicaraguan colleagues and with other solidarity groups in the U.S. Please contact us if you are interested in working with one of these projects.

### Contrapartes a Distancia/The Health Connection

Keeping up with scientific progress requires access to the latest scientific literature. Nicaragua cannot afford the to subscribe to the vast number of specialized journals presenting the latest advances. Research and education suffer not only from material limitations, but also from the scarcity of experienced researchers, research advisers, and lecturers.

On the other hand, hundreds, if not thousands of North Americans—medical doctors, scientists, researchers, students, and other health-care workers—are in solidarity with the people of Nicaragua but cannot come to this country because of professional and personal commitments. The Health Connection project intends to give these North Americans the possibility of developing a partnership with their professional and scientific counterparts in Nicaragua. This partnership would include sending material aid—mostly photocopies of specifically requested articles—but will not be limited to it. What we have in mind is rather an equal professional and scientific relation in which ideas are exchanged, advice proffered, and projects discussed. Sharing specialized skills and research methods with Nicaraguan colleagues can make a difference.

Generous help from Holland, Finland, and Sweden is providing some essential research equipment. Your assistance would help to put this equipment to effective use. Lack of periodical literature is paralyzing research projects and severely hampering teaching. Your help in securing subscriptions to important publications such as *Current Contents* will also be most welcome. Even individual students with access to good libraries can help by locating and xeroxing scientific articles requested by a Nicaraguan counterpart.

In Nicaragua, biomedical research is immediately and directly relevant to public health—especially child health. The Health Connection project is not just cooperation in scientific research; it is to be a contribution to the delivery of effective health care to a people facing the hardships of war and natural disaster.

The project will facilitate the initial contact between a Nicaraguan individual or team and a possible North American counterpart in the same field. The type, extent, duration, and purposes of the partnership are then arranged directly by the two counterparts. This makes for a minimal administrative structure whose only tasks are facilitating the initial contact and ensuring the smooth flow of written and electronic correspondence.

Unfortunately, mail service between Nicaragua and the U.S. is slow and unreliable. It will be necessary to send mail to an address in Berkeley where it will be collected and forwarded to Nicaragua by means of individuals and delegations traveling there. A computer link—through PEACENET—is also being set up. The School of Medicine of UNAN-Managua is committed to providing administrative support to the project.

Each time you send a missive, we'll ask you for a small contribution to help defray the expenses involved in sending to Managua the boxes of letters and literature we receive. Of course, any additional donation will be most welcome.

Please write to Contrapartes a Distancia/The Health Connection stating your area of specialization and how you hope to cooperate with a Nicaraguan counterpart. Our addresses:

THE HEALTH CONNECTION, c/o Science for Nicaragua, 3217 College Ave., Berkeley, CA 94705;  
CONTRAPARTES A DISTANCIA, Facultad de Ciencias Medicas,

UNAN-Managua, Apdo. 3999, Managua, Nicaragua;

Peacenet address: si!ward

Contrapartes a Distancia/The Health Connection is a joint project of the UNAN-Managua Faculty of Medicine, The National Central American Health Rights Network, TecNICA, and SfN/SfNP.

### Medicinal Substances Pharmacology Lab

extracts from a proposal by Dr. David Kattenburg,  
SfN cooperant, UNAN-Managua Faculty of Medicine

The laboratory would be equipped for the isolation and characterization of medicinally active substances from plants commonly used in Nicaragua, and for their pharmacological testing. Members of the laboratory might set out, for example:

1) To isolate the active substance of a plant that kills hookworm, then try to assay the activity of this substance on hookworms in a dish, or on some reduced portion of the worm *in vitro*;

2) To isolate anti-asthmatic, anti-hypertensive, or cardioactive substances from river roots, and then test their pharmacologic activities on strips of muscle in an organ bath preparation.

With the appropriate equipment for such experiments in place, and with preliminary research under way, it would be easy to integrate Nicaraguan professors at the medical faculty into the research process. The research could eventually be handed over to them entirely.

We could easily spend two or three years getting such a lab set up. Among the first things we can do is solicit the establishment of support groups abroad. These groups might agree to send us bibliographic material (via The Health Connection, discussed above), raise funds for the purchase of equipment, and obtain equipment and material for us. We need virtually everything for this laboratory: simple things like glassware, water distillation equipment, pH meters and so on, as well as more expensive and bulky equipment like fractionators, shaking water baths, a dual-beam spectrophotometer...

An immediate task is to find out what research has already been conducted on medicinal plants in Nicaragua. This winter, I will be traveling to places where I can obtain information on medicinal plants evaluate current research. In León, people are now working on some isolations. Estelí is the capital of the medicinal plant "valorization" movement in Nicaragua; much work has been conducted there on the cataloguing of medicinal plants and their use.

The next step is to select an appropriate plant for study, one that acts against a disease or infectious agent that can be manipulated in the laboratory. For example, working on an anti-asthmatic or anti-hypertensive substance would be challenging and practical. Once we have our organ bath equipment in place, it could itself become the nucleus for an independent physiology and pharmacology lab.

I imagine an accomplished laboratory researcher at the UNAN, trained as a physician, who continues to practice within the community, and who complements that practice with lab research on a disorder frequently encountered there. The perfect people in Nicaragua to be working on new solutions in health care in the lab are health-care workers themselves. They've gone through five years of "work-study"—going from door to door, speaking to people, giving inoculations at school, working in health clinics, hospitals, serving emergency duty in the midst of a hurricane.... The idea here is that this research program could be revolutionary. It could create a cadre of research scientists concerned primarily with practical and immediate community health problems.

I plan to complete my investigations in León and Estelí by the end of February. At this time, we might begin drafting grant applications on the basis of a more specific research proposal.

## A Medical Video Library

a letter from Alan Archibald,  
SfN cooperant at UNAN-Managua Medical School

Yesterday my dream of a modem connection between the Med Faculty's computer room and cooperants in Berkeley and Boston became a reality. We're founding a program called "Contrapartes a Distancia/The Health Connection," whose purpose is to link Nicaraguan professionals with their North American counterparts. The computer network (via Peacenet) will serve as the basic link in each chain. Here at the Faculty we shall stock *Current Contents: Biomedical Edition*, thus enabling Nicaraguan health care workers to access the whole field of current literature—quite an improvement over the existing dearth of journals, and the 5-year lag-phase created by textbooks no more recent than 1984.

However, it's on another front that I hope to move forward now. Before March, 1989, I intend to procure my own video equipment even if I have to erode dwindling savings to make it happen. For the next several months, videographer Mark Coplan is willing to help initiate UNAN's "Medical Video Library." It will, we believe, become a linchpin of medical education within the faculty. And we are also hopeful of enlisting the assistance of Sandinista TV in broadcasting a thrice-weekly program for the benefit of healers nationwide.

We will begin by taping the gamut of Nicaraguan medical procedures as currently performed in Managua, León, and numerous rural outposts. We will then survey faculty members (and other interested participants) to learn which of these procedures can be improved with greatest benefit. According to their suggestions, we will tape the corresponding procedures in a variety of incrementally more sophisticated settings. We have contacts in San José, Caracas, Mérida and Puebla (in Mexico), and Spanish-speaking Miami, with whose help we can flesh out the long-term vision.

Medical education at UNAN-Managua is textbook-oriented. There are many irksome obstacles to a more dynamic program: for example, students are often barred from surgical theaters for lack of sterile garments. It's even been rumored that when the current supply of recycled cadavers can no longer be picked over, that will be an end to the use of real corpses for anatomical dissection. Apparently, the cost of "pickling" them is prohibitive. In any event, since the last actual dissection was performed here in 1982, it would be a boon to have a record of dissection on tape. Already I envision late nights at the morgue with visiting anatomists.

We will need a minimum of three 120 minute mid-to-high quality blank VHS tapes *per week* through my departure in late July 1989. If the project goes as planned, I envision returning to Nicaragua within a year to resume shooting.

*Editor's footnote: Physicist Bill Lankford, featured in Vol II, No. 3 of the Newsletter, has donated his car to SfN, primarily in order to facilitate the medical video project. In a letter dated December 7, SfN cooperant Roberto Trippini reports that the project is now "an ongoing activity."*

## KATTENBURG, *continued from p. 1*

cally active components from local, anti-parasitic plants, herbs and seeds. We may have to consult with a "curandero" — or natural healer — before setting off into the fields and valleys in search of medicinal plants.

I recommend to anyone coming down here to consider living with a family. After six weeks in Nicaragua I feel like I am part of the neighborhood. Everyone wants to know if I'm married, if I have children, if I have a girlfriend, if I want a Nicaraguan girl-friend, if I would like to get married to someone they know down on the other end of the block, and so on. Children laugh and point at me because my head lacks hair, and I have been called "frijolón"...which I guess could be translated as beanhead.

October 4, 1988

It is 8:20 in the morning at UNAN. The pharmacology and physiology departments begin to stir. The sounds of scraping chairs and student discussions echo through the concrete courtyard outside my office. Just beyond my office door there is a balcony overlooking fields, lush, green woods and Lake Managua. The lake is covered in haze. Only the nearest range of volcanic hills are visible this morning, beyond a stand of palm trees.

The medical faculty is a pleasant place to be. Each of the five years have chosen their "queens"—amidst the banging of drums, the racket of costumed and painted med students stomping through the halls, the blaring of trumpets, the roar of automobiles and motorcycles off the walls of the halls below, enthusiastic acceptance speeches, firecrackers, overamplified pop music and lots of other noises that render all attempts at work futile. This is an annual ritual. All classes come to a halt. People leave their offices to watch the madness going on in the grassy area of the central courtyard.

I lecture for two hours each Monday. A tutorial/journal club session had been planned for Fridays, but this has been cancelled on numerous occasions in order to make room for faculty meetings invariably called at the last moment. Those Friday sessions that have taken place have been lively and instructive. So far, only the four professor/physicians in the class have managed to read, digest and present to the class a letter to *Nature*. The English is daunting, not to mention the density of technical information.

A list of twenty journals we would like to subscribe to on behalf of the medical faculty has been sent to SfN-Berkeley. Journals would be placed on the shelves of the faculty's new reading room, dedicated to the memory of Denis Silva Torrez, who dropped his studies in 1983—just months before he was to graduate — in order to become a medic in the northern province of Nuevo Segovia. He was killed there by Reagan's "freedom fighters."

The Denis Silva reading room has the beginnings of an eclectic health sciences textbook collection. Many of these books have been provided by solidarity groups in the United States and Canada. Contributions — either recent, advanced undergraduate

*continued on p. 4*

Enclosed is my tax-deductible contribution of \$\_\_ to keep SfN instructors in Nicaragua.

I want to subscribe to *SfN Newsletter*.  
Enclosed is \$10 for a one-year subscription.

Name: \_\_\_\_\_

Affiliation: \_\_\_\_\_

Address: \_\_\_\_\_

Tax-deductible contributions should be made out to  
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Cambridge, MA 02139



## Casa Benjamin Linder

Last October, SfN-Managua became the ninth group to join the Casa Benjamin Linder (CBL), the headquarters of the new umbrella organization of U.S. solidarity groups in Nicaragua. SfN cooperant Roberto Trippini, who teaches history and philosophy of science at UNAN-Managua, promptly volunteered for the CBL policy planning committee, which promises to turn the umbrella group, in Roberto's words, into one "which will finally allow the 1500-2000 U.S. activists in the country to become a visible, effective political presence with strong projection in the States."

As of October, it was expected that the purposes and functions of the CBL would be

1. To serve as a memorial to Benjamin Linder and his work.
2. To provide office space to a limited number of citizen organizations.
3. To provide a gathering place for member organizations to hold business meetings, seminars, press conferences, educational and cultural events.
4. To be an information/resource center, including the following services: (a) providing members and visitors current information and contacts; (b) maintaining a bulletin/message board for members and visitors; (c) selling selected publications in English and Spanish, and possibly also (d) displaying photos of projects of member organizations; (e) showing videos about Nicaragua and other matters of common interest; (f) offering oral and written translation services; (g) sponsoring cultural/social events.
5. To house the CBL staff, equipment, and materials.

SfN-Managua has proposed several additional projects for the CBL, including providing an alternative press center (with monthly "Disinformation Awards" to the most mendacious U.S. journalist or publication), an alternative Fourth of July celebration, and providing a forum for visiting North American personalities who wish to speak up against U.S. policies in Central America.

## Recent Donations

Science for Nicaragua continues to receive generous support from our friends. Numerous private donations, from readers of the *SfN Newsletter* and others, have permitted us to expand our work and initiate some of the projects described elsewhere in these pages. We are especially pleased to acknowledge a recent grant of \$1100 from the Crane Family Friendship Fund.

SfN pioneers Wally Elliott and Phyllis Palmer report a different

sort of donation. Just over 1500 lbs. of scientific books and journals, which over the last year have been arriving from various parts of the country and gathering in their living room, have just been sent off to the five Nicaraguan universities. Thanks are due to Wally and Phyllis for their consistent generosity and apparently unlimited patience.

## KATTENBURG, *continued from p. 3*

textbooks or specialty texts suitable for preparing introductory graduate-level courses in medicine and related health sciences fields — can be sent to SfN's Berkeley offices. The reading room needs texts in Spanish that are often available in Mexico. Cash contributions to SfN for the purchase of these by groups travelling through Mexico City to Managua would be particularly useful.

November 9, 1988

Hurricane Joan has come and gone, wreaking havoc upon Corn Island, Bluefields, Rama and vast areas between the center of the country and the Atlantic Coast. Classes have been cancelled at the Medical School. They are due to open this coming Monday. Some 200 medical students volunteered for duty days before the arrival of Joan. Most of them wanted to go to Bluefields. The Faculty had to convince many to stay here in Managua where needs would be less acute, but important nonetheless.

My molecular pharmacology class was subjected to some frank evaluation by the four physician/professors—and particularly by the *alumnos ayudantes* (senior med students/teaching assistants). My pace was much too rapid, they said, and my style lacked "dynamism." They wanted more interaction—more discussion—in order to flesh out the topics more fully. They were having a difficult time seizing the practical relevance of molecular pharmacology, and wanted me to discuss clinical applications of this knowledge. Well, we had a number of rap sessions, and I changed my approach. As a consequence, the mood of the class had improved considerably by the time Hurricane Joan came to town.

*Note: SfN communications between Managua and the U.S., including David's letters, are now passing through the electronic mail network PEACENET, by way of the microsystems cooperative Sistemas Industriales (SI). David invites newsletter readers who are "on line" to send messages to si!ward on Peacenet.*

*SI develops microcomputer based software specifically designed to meet the needs of the third world, and uses electronic mail to consult with technical experts around the world. More on SI in the next issue of the newsletter.*

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